



digitaluk

Digital TV switchover 2008-2012

Final Report





The Rt Hon David Cameron MP
Prime Minister

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‘The UK’s switch to digital television has been the biggest single change to broadcasting for a generation. It has delivered more choice for millions of viewers and paved the way for exciting new services, securing our role as a global player in broadcasting and creative industries.

‘The fact that this complex and challenging programme of change was delivered on time and under budget is a testament to the skill and dedication of all involved.’

Chairman's report



Ed Vaizey MP
DCMS

I am delighted to take this opportunity to congratulate all those who have played a part in the unqualified success of the digital television switchover.

After supporting this policy in opposition, I am very pleased to be the minister responsible for seeing the project through to completion. On behalf of the government, I would like to pay a huge tribute to all the organisations involved. Their great work in managing the complicated engineering programme and in supporting viewers, ensuring that switchover ran on time and within budget, has been a major factor in retaining such a broad consensus of political support.

Digital UK and the Switchover Help Scheme were given the huge task of preparing the country for the switch to digital TV and have achieved this almost faultlessly. Alongside Digital Outreach, both organisations worked closely with charities across the UK to reach those communities and individuals who needed extra support – a commendable example of public, private and voluntary organisations working together to achieve a common goal, and fundamental in ensuring the success of switchover.

The benefits of switchover to the UK's economy, industry and viewers will be widespread. I cannot overestimate the importance of digital television, with its better choice, picture quality and sound, now being available to almost all UK homes, but also of the valuable spectrum that has been freed up for exciting new services such as mobile broadband.

Ed Vaizey MP, Minister for Culture, Communications and the Creative Industries



Colette Bowe
Ofcom

I offer my congratulations and thanks to all those involved in delivering digital switchover for the benefit of UK consumers. Digital UK's role in this was central in organising the programme and communicating effectively with viewers.

In April 2004, Ofcom issued a report to government recommending how switchover should be managed to realise the significant benefits it could bring to citizens and consumers. Our subsequent role has been to support the programme in planning, licensing and international co-ordination.

Ofcom amended the broadcast licences requiring the delivery of switchover to the timetable set by the government. It also issued over 200 licence variations to reflect the frequency and power changes required to deliver digital switchover.

Working with BBC and Arqiva planners, Ofcom delivered the frequency plan for all transmission sites, meeting the primary objective to cover 98.5 per cent of UK households for the public service channels and around 90 per cent for commercial services. This also cleared a 'digital dividend' of spectrum for new 4G mobile broadband services.

We also led the international negotiations to agree the transmitter network plans for switchover, attending over 140 international meetings with neighbouring countries and reaching formal international agreements to ensure protection of the UK switchover plan.

Ofcom warmly congratulates the teams at Digital UK, the Switchover Help Scheme, Arqiva and the broadcasters who have worked so hard to deliver this successful project.

Colette Bowe, Chairman, Ofcom



Barry Cox
Digital UK

Welcome to the final report on the UK's digital TV switchover. The following pages highlight not only the great complexity of upgrading the terrestrial TV network but also the enormous efforts which were required to support viewers through the process.

In the calm glow of 2012, it is easy to forget the nervousness and uncertainty which surrounded switchover at the outset. The risky job of delivering the project was delegated by government to the terrestrial public service broadcasters. New clauses in the BBC Agreement and other broadcaster licences required them to co-operate, with the BBC providing the bulk of the funding.

This approach worked very well and led to the creation of Digital UK and the BBC-run Switchover Help Scheme. Government and Ofcom officials played their parts in the supervision of day-to-day activities with quiet diplomacy. The mutual trust among those involved and their experience of regulatory discussions over the years proved invaluable when challenges arose or difficult decisions had to be made.

When we started the programme we thought our main communications task was to get people to buy digital TV equipment in good time, particularly among older viewers, many of whom were wary of new technology. Great credit must go to the campaigns designed by the Digital UK communications team, which ensured that no one was left behind. Successful delivery of the Help Scheme, which supported more than a million households, was also decisive in silencing critics of the overall policy.

As it turned out, many viewers didn't need persuading. They willingly converted to digital TV of their own volition, attracted both by the popular extra channels and the new generation of flat-screen TVs. So one of our main communications challenges was to support Freeview viewers who had to retune their equipment not only at switchover but also whenever frequencies

were juggled to accommodate the transition to a fully digital terrestrial network.

Overlapping signals between neighbouring regions were occasionally a problem for viewers in this respect. For example, some Granada viewers retuned and found themselves getting Welsh television as a result of the stronger signals being used. Our advice line team played a vital role in helping viewers to receive their preferred regional service and became highly adept at resolving these and other reception equipment issues.

Another important source of help were the 3,500 local charities which lent their support. A small army of volunteers was mobilised in each region, staging information events and staffing advice points on switchover days. This was invaluable community help which was well beyond the resources of the core Digital UK and Switchover Help Scheme teams.

I must also express thanks to Arqiva, the company that owns the terrestrial TV network and which carried out the upgrade to transmitters serving every corner of the country. It did a superb job with scarcely a hitch.

Finally, I must pay credit to the staff of Digital UK and its chief executives – Ford Ennals got us off to a great start and from 2008 David Scott took up the reins and brought us safely home, on time and significantly under budget. Working with all those involved has been a great pleasure.

Chief Executive's report



David Scott
Digital UK

I am delighted to be reporting on the successful completion of the digital TV switchover. Our five-year journey around the UK, ensuring this major change was delivered on time and with minimal inconvenience to viewers, posed enormous challenges but was also hugely rewarding.

As our chairman Barry Cox notes in his introduction, at the outset there was considerable political and public concern about the delivery of switchover. When the timetable was announced in 2005, more than three-quarters of homes were still analogue on at least one TV. A select committee report in 2006 was clear in its assessment that switchover was a 'brave' policy decision and that delivery of this 'highly complex undertaking would require co-ordination and co-operation across a wide range of organisations'.

The brave decision to proceed has now paid dividends for viewers. We have a fully modernised terrestrial TV network, capable of delivering multichannel TV, high-definition channels, digital radio, text and a new generation of on-demand services to virtually every home in the country. Without switchover, this would never have happened.

Managing the scale and complexity of switchover was undoubtedly one of the greatest challenges. The transmitter network to be upgraded comprised more than 1,150 separate sites, serving 26 million homes. Spectrum planners from the BBC, Arqiva and Ofcom devised a plan around a complex web of interdependencies, taking into account factors such as local topography, incoming signals from the continent and the potential for a change at one site to have knock-on effects elsewhere affecting thousands of viewers. Arqiva, which owns and operates the network, did a magnificent job in completing all the engineering work on time, often in adverse conditions and against tight deadlines.

Building a nationwide communications campaign to fit around this change also brought unique demands. Developing a strategy to reach every viewer, from those fearful of new technology to digital-savvy young families, required extensive research and analysis. Delivery of a campaign with hundreds of critical dates also required scrupulous planning and close management to ensure the right messages were delivered to the right viewers at the right time. The combined efforts of the Switchover Help Scheme and the thousands of charities who lent their support also ensured those early fears of viewers being left staring at blank screens were never realised.

We were determined from the outset to keep switchover simple for viewers despite the underlying complexity

In looking back at the delivery of switchover, there were aspects of our approach which helped mitigate the difficulties. Key among these was our determination from the outset to keep it simple for viewers despite the underlying complexity of broadcasting and the vagaries of some reception equipment. But above all else I believe it was the very local focus of our campaign and grass roots work of our regional teams, roadshow staff, retail support teams and charity volunteers which made the difference. On a visit to the North East, one man who I met had run around 300 separate training sessions for fellow volunteers. Coupled with a tailored information campaign in each area and a brilliant team of advice line agents, I believe we managed to deliver switchover with a human touch which could easily have been lost amid the logistics of delivering change on this scale.

I am also proud of our continuing search for savings and rigorous programme management which together helped us complete on time and 37 per cent

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SEPTEMBER
2005

Switchover
timetable
announced

under budget. You can read more about these and other aspects of how switchover was managed in this report. We have also published a series of more in-depth 'switchover insights' about how each strand of the programme was run and what we learned along the way at digitaluk.co.uk/insights

Finally, I would like to thank all those who have contributed to the success of switchover. I must pay a personal tribute to my own management team through these last five years: Alex Pumfrey who has managed the programme so efficiently and ensured the success of our viewer contact centre and website; Beth Thoren, whose advertising and marketing ensured that no one could say that he or she did not know switchover was coming; Mike Hughes, whose many years of broadcast engineering experience made him the perfect person to co-ordinate our engineering partners; and Simon Crine, who developed our presence in the regions and nations of the UK, created our charitable partnership with Digital Outreach and managed our relationship with the media and politicians.

The whole staff at Digital UK did a wonderful job of leading implementation of the programme but inevitably relied heavily on the hard work and dedication of many other organisations, from government departments, the broadcasters and industry to small local charities. Our board members and chairman were also unstinting in their support and instrumental in our success. This was a huge team effort in which all involved played their part.

David Scott

Digital television switchover 2008-2012



Caroline Thomson
BBC

At the BBC, we've been involved with digital TV switchover since the very beginning and we're very pleased at the successful completion of the programme. It's been a long journey, especially when you consider that the technical, operational and strategic planning started here more than a decade ago. Indeed, it was a small group of people in my team who, with colleagues at the other public service broadcasters, planted the seeds that eventually flourished into Digital UK.

A programme which has gone so smoothly for viewers masks the extent of the re-engineering which has gone on behind the scenes. We've worked with our technology and transmission providers to fundamentally reorganise how we get TV programmes from the studios to the home. In doing so, we've been undertaking the largest broadcast engineering project in history – all the while making sure that viewers and listeners could continue to get our services despite the disruption happening at the transmitters.

The BBC has led the Switchover Help Scheme: the vital public service that has delivered on the government's promise that when it came to digital switchover, no-one would be left behind. Providing assistance to the most vulnerable in society is a hugely complex and important undertaking and we're proud to have done so expertly and substantially below the budget set.

But the real success of switchover is in the uniting and co-ordination of the public service broadcasters in delivering a very significant public project. A project that touches every home, every voter, every consumer in the land is a uniquely challenging prospect. I'm convinced that it has been the spirit of active co-operation and the consensus building inherent around the Digital UK board table that has made it so successful.

Caroline Thomson was Chief Operating Officer at the BBC from 2006-2012 and represented the BBC on the Digital UK board.

Switchover explained

Digital TV switchover has seen the UK's terrestrial television system converted fully to digital channels and services. Analogue channels broadcast from more than a thousand transmitter sites have been switched off, region by region, and digital (Freeview) signals boosted to match coverage.

Before switchover, millions of households in the UK were unable to receive digital television through an aerial due to the scarcity of airwaves suitable for broadcasting. While around 80 of the UK's largest transmitter sites had broadcast Freeview services for a number of years, more than 1,000 smaller relay transmitters remained confined to a line-up of just four or five channels.

Switching off the analogue system has created the capacity to extend Freeview coverage to virtually all homes, including millions served by relay transmitters. Today, more than 40 free-to-air terrestrial TV channels are available to nine-out-of-10 UK households, with the relay site line up boosted to around 15 TV channels – plus free-to-air HD services.

As well as increasing channel choice, digital TV offers a number of other benefits including on-screen programme guides, improved recording, subtitles, audio description for the visually impaired, digital radio stations and interactive services. Digital broadcasting is also much more efficient, allowing for better use of valuable radio spectrum and creating space for

new developments, such as ultra-fast wireless broadband. In 2006, Ofcom estimated the benefit to the UK economy from spectrum released by switching off analogue TV signals would be £5-10 billion.

While the UK has always been a leader in digital television, other countries have also switched or are in the process of moving to all-digital services. Plans for switchover and the use of frequencies have been co-ordinated across Europe. The process is now expected to be completed across the EU by 2015.

The impact on viewers

Most viewers have found switchover straightforward. For the majority it was simply a case of retuning Freeview TV equipment as signal strength was boosted and channels moved to new frequencies. However, those still watching analogue channels needed to convert their sets with a digital box, generally available from around £20, or replace them to continue receiving programmes. Digital TV is available via an aerial, satellite, cable or broadband and these services can be used with virtually any TV, even black and white models.

In a small number of cases, viewers may have also needed to replace or realign their aerial to ensure the best reception. Those already watching cable or satellite on all of their sets were not affected. Viewers were able to check the options for digital TV in their area and get help with retuning at digitaluk.co.uk, or by calling the Digital UK switchover advice line.

Switchover progress

End 2008	74,000 homes switched (0.3 per cent)
End 2009	4.8 million homes switched (18 per cent)
End 2010	7.1 million homes switched (27 per cent)
End 2011	17.6 million homes switched (66 per cent)
End 2012	26.7 million homes switched (100 per cent)

17

OCTOBER
2007

Whitehaven in Cumbria makes TV history as the pilot for switchover begins



How switchover happened

Switchover happened in two stages across each transmitter area. At stage one, analogue BBC Two was turned off and BBC digital channels became available for the first time to viewers watching local relay transmitters. At stage two, all remaining analogue channels were switched off and additional digital services launched from relays. The exception to this was Channel Islands, the smallest of the 15 TV regions, where switchover completed on a single day.

Regional manager John Askew announces the date for the switchover pilot in Cumbria.

6
NOVEMBER
2008

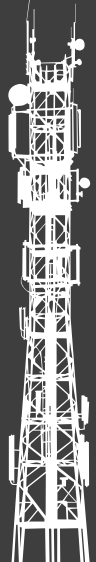
The switchover
programme
begins in the
Scottish Borders




Roadshows run by Digital UK and the Switchover Help Scheme provided face-to-face advice to more than half a million viewers.

Switchover by numbers

1,154
transmitter sites
upgraded



12,000
volunteers and
charity staff helped
people switch



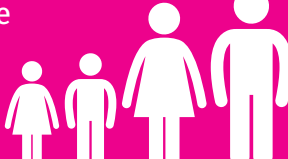
2 million
calls handled by the
Digital UK advice line



26
million
homes can now
receive Freeview



10
million
viewers brought into
Freeview coverage for
the first time



OPEN
13,000
approved digital
advisers in stores



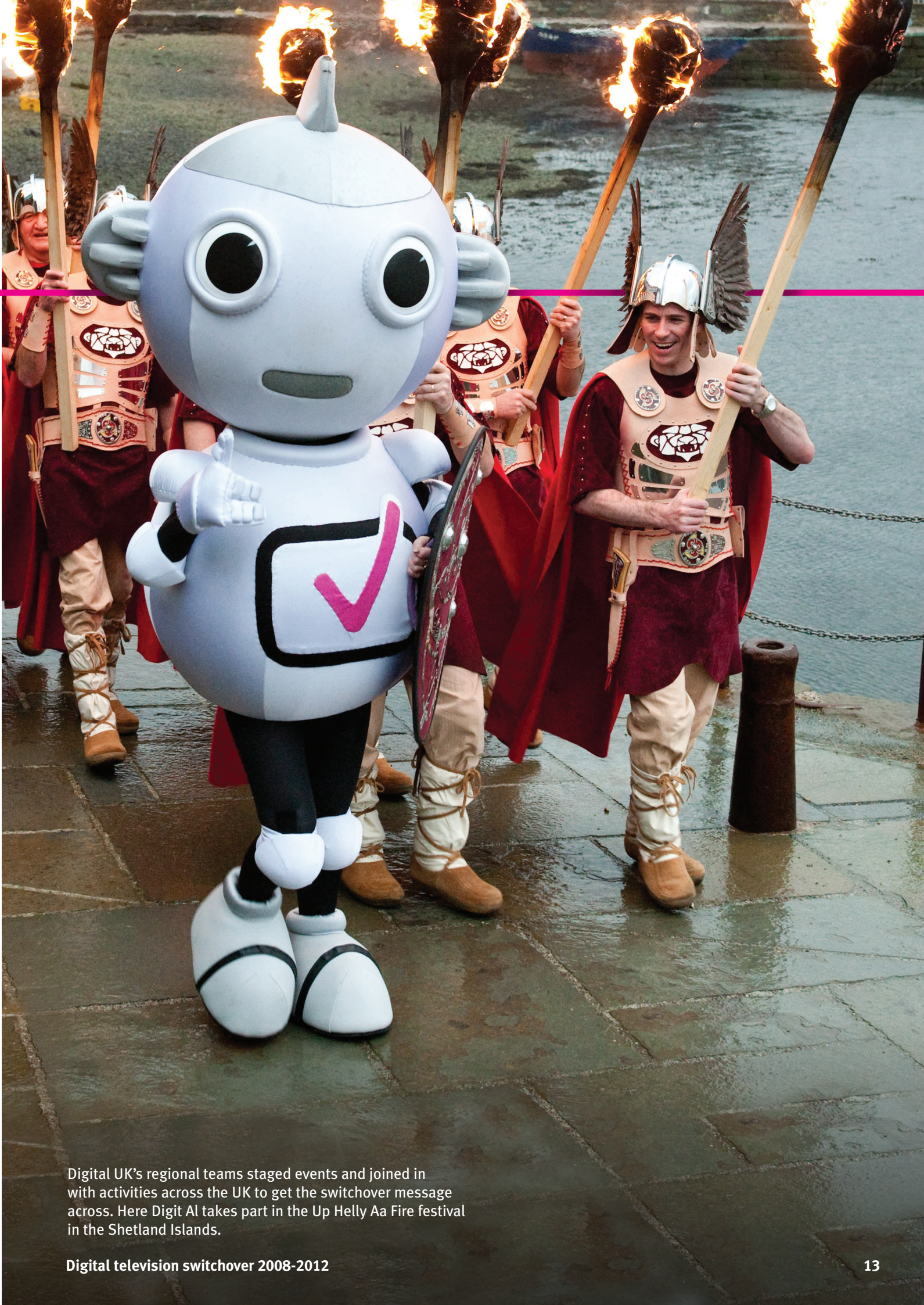
15
TV regions



2,000
roadshows provided
face-to-face advice

Switchover regions

Border Regional Manager: John Askew Number of homes: 398,000 Switchover started: 17 October 2007 (Whitehaven pilot) / 6 November 2008 (main programme) Switchover completed: 22 July 2009	STV North National Manager: Paul Hughes Number of homes: 602,000 Switchover started: 5 May 2010 Switchover completed: 20 October 2010	Yorkshire Regional Manager: John Askew Number of homes: 2.6 million Switchover started: 3 August 2011 Switchover completed: 21 September 2011
West Country Regional Manager: Bill Taylor Number of homes: 781,000 Switchover started: 8 April 2009 Switchover completed: 9 September 2009	STV Central National Manager: Paul Hughes Number of homes: 1.7 million Switchover started: 13 October 2010 Switchover completed: 22 June 2011	Meridian Regional Manager: Bill Taylor Number of homes: 2.1 million Switchover started: 8 February 2012 Switchover completed: 27 June 2012
Wales National Manager: Emyr Hughes Number of homes: 1.3 million Switchover started: 12 August 2009 Switchover completed: 31 March 2010	Channel Islands Regional Manager: Bill Taylor Number of homes: 50,000 Switchover started/completed: 17 November 2010	London Regional Manager: Deborah Bain Number of homes: 4.9 million Switchover started: 4 April 2012 Switchover completed: 18 April 2012
Granada Regional Manager: Jo Waters Number of homes: 3 million Switchover started: 4 November 2009 Switchover completed: 2 December 2009	Central Regional Manager: Peter Monteith Number of homes: 4.1 million Switchover started: 30 March 2011 Switchover completed: 28 September 2011	Tyne Tees Regional Manager: John Askew Number of homes: 1.4 million Switchover started: 12 September 2012 Switchover completed: 26 September 2012
West Regional Manager: Bill Taylor Number of homes: 913,000 Switchover started: 24 March 2010 Switchover completed: 7 April 2010	Anglia Regional Manager: Peter Monteith Number of homes: 1.9 million Switchover started: 30 March 2011 Switchover completed: 23 November 2011	Northern Ireland National Manager: Denis Wolinski Number of homes: 649,000 Switchover started: 10 October 2012 Switchover completed: 24 October 2012



Digital UK’s regional teams staged events and joined in with activities across the UK to get the switchover message across. Here Digit Al takes part in the Up Helly Aa Fire festival in the Shetland Islands.

Preparing for switchover



Tessa Jowell
MP

In 2005, when we began the switchover to digital television, we had two choices. We could either follow the market, trying to make retrospective sense of how society is changing as a result, or get ahead of the curve, shaping the future and ensuring that the fruits of this technology are evenly spread.

As we say goodbye to analogue television I am glad that we took the latter course. It was important that all UK households were able to benefit from digital TV, ensuring that everyone has a choice of digital TV options that they can afford. This could only have been achieved through a universal switchover from analogue to digital signals.

The switch to digital TV has been the biggest project in broadcasting history, providing people with more channels and viewing content while freeing up valuable spectrum.

The release of this spectrum is not just important to meet the growing demands of our smart phones – but has also been used to power the Olympic and Paralympic Games. Spare capacity released over the last 18 months has been used to power the wireless microphones, TV cameras and other forms of communication that were so important to London hosting a successful Games.

I would like to congratulate Digital UK for its success in delivering a complex project such as this on time and significantly under budget.

Dame Tessa Jowell MP was Secretary of State at the Department for Culture, Media and Sport from 2001-07

Getting started
On 18 September 2003 Tessa Jowell, Secretary of State for Culture, Media and Sport, told a Royal Television Society conference that ‘the advantages of digital are such that the question is not whether, but how and when we will achieve switchover’. A year later she confirmed the timetable and Ofcom committed the broadcasters to switch off the analogue signals by 31 December 2012.

At this point the baton for delivering digital TV switchover was handed to the public service broadcasters. Half of all homes were still watching just the four or five analogue channels, and research commissioned by the Department of Trade and Industry suggested that while 30 per cent ‘could be persuaded’ to switch, a resistant minority said that they ‘would not’ move to digital.

In the face of this challenge broadcasters more used to competing with one another for viewing share had to find a way of co-operating to deliver switchover. They concluded quickly that the most effective way to do this would be to create a single-purpose organisation to lead the switchover programme. A group drawn from across the broadcasters and digital TV multiplex operators came together, and on 12 April 2005 a new company with the working name SwitchCo Ltd was created.

In its earliest days the small SwitchCo staff was seconded from the member organisations and worked in a corner of DTI offices. In spring 2005 Ford Ennals was appointed as the company’s first Chief Executive, and the skeleton of the switchover programme was pieced together.



Three million homes complete switchover in the Granada TV region

In September 2005 the company was launched as Digital UK. By the end of the year we had moved into new premises and recruited a team with the mix of expertise needed to deliver upon the switchover challenge.

Building on the work of the government’s Digital TV Action Plan, workstreams were established covering everything from consumer communications and supporting housing to the re-engineering of the transmission network. Various stakeholder engagement groups were established, and the early plans and structures were discussed with stakeholders and consumer groups, refined, and then eventually published as the ‘Programme Structure’. This document became the touchstone for the programme: setting out the roles and responsibilities of those involved, collective aims, and measures of success.

The task of drawing together these diverse areas of work, co-ordinating activity and sharing information fell to the central Programme Office and its team of project managers. It was their engaging project management style which came to characterise how switchover was run, working collaboratively to support the successful delivery of this vital national project.



Developing the plan



1999	Chris Smith MP, Secretary of State for Culture, Media and Sport suggests a ‘digital TV switchover’ if affordability and availability criteria can be met.
2001	Government launches Digital TV Action Plan jointly with industry.
September 2003	Tessa Jowell MP, Secretary of State for Culture, Media and Sport confirms the government’s commitment to switchover: ‘The advantages of digital are such that the question is not whether, but how and when we will achieve switchover’.
July 2004	Tessa Jowell sets the 2008-2012 timetable for the switchover programme.
September 2004	Ofcom instructs the analogue public service broadcasters to cease analogue transmissions by 31 December 2012.
February 2005	Ofcom publishes a report on digital switchover, recommending the 2008-2012 regional timetable. DTI and DCMS cost benefit analysis suggests £1.7 billion benefit from switchover programme.
March 2005	Analogue signals switched off at the Ferryside transmitter in Carmarthenshire, Wales, to test viability of switchover and consumer response.
April 2005	SwitchCo Ltd formed by the public service broadcasters and digital television multiplex operators to lead the delivery of switchover.
September 2005	Tessa Jowell announces regional timetable for switchover and the Switchover Help Scheme. Digital UK (formerly SwitchCo Ltd) launches.
March 2006	Commons Culture, Media and Sport Select Committee publish a report on ‘Analogue Switch-Off’.
May 2006	First major consumer communications campaign launched by Digital UK.
May 2006	DCMS publishes a report on the Bolton digital television trial which explored what types of switchover support would be needed for those aged 75 and over.
May 2007	DCMS and the BBC sign the Switchover Help Scheme Agreement, setting out the support that would be provided to those aged 75 and over and meeting certain disability criteria.
October 2007	First full switchover at Whitehaven in Cumbria begins, completing in November. Lessons fed into main switchover programme.
November 2008	Regional switchover programme commences in the Scottish Borders.



Jon Zeff
DCMS

It was always clear that digital TV switchover would require the co-operation of a wide range of partners in order to succeed. To me this has been both the key challenge and the defining strength of the programme.

No one organisation controlled all of the levers necessary to make it happen: the government recognised early on that it had an important role in setting the direction and framework for digital switchover, but the actual implementation needed to be led by the industry. The regulator had a crucial enabling role. And the contributions of charities and consumer groups were vital in helping us to identify and provide help to those most likely to need it.

I remember, in the days of the Digital TV Action Plan, various groups convening to tackle all the difficult pre-implementation issues – the choice between 16 and 64 QAM, the design of a help scheme, accreditation of aerial installers and many others. The structures and relationships set up to implement switchover reflected this broad partnership, from Digital UK and the Switchover Help Scheme, to forums such as the Switchover Programme Group and Ministerial Switchover Group, which have brought the key parties together regularly throughout the programme, in open and solution-focused discussions.

There is currently an intense focus, both within and outside government, on how we can ensure more consistent success in major projects. I believe we can learn much from the success of digital TV switchover – an excellent example of how organisations with different interests can be brought together to achieve a common goal.

Jon Zeff, DCMS Director, Senior Responsible Owner for the Digital TV Switchover programme



John Whittingdale
MP

After I took over as Chairman of the Culture, Media and Sport Select Committee in 2005, we decided that our first major inquiry should be into the proposed switchover from analogue to digital television.

I remember the alarm on the faces of members of the Committee when, in our very first session, our witnesses were relentlessly gloomy in warning of astronomic costs; the risk of TV screens across the land ceasing to function; engineers blown off the top of transmitters as they wrestled in the middle of winter to try and convert them in time; and queues around the block of people desperate to get hold of set-top boxes before switchover happened. We produced a report which could be summarised in that old *Yes Minister* phrase: ‘this is a very brave policy’.

I would like to think that by highlighting some of the challenges in our report we helped ensure that potential problems were avoided. Since then, we have continued to monitor the process and were impressed when the first region was switched to digital with almost no problem at all. That success continued with larger regions such as Granada switching with very little protest or complaint. We have now reached the end of the programme and can say with confidence that switchover has been achieved far more smoothly than we dared hope; the fact that MPs’ postbags have been relatively empty of complaints throughout is a tribute to how much has been achieved.

All of the organisations that have played a part in switchover have done a great job.

John Whittingdale OBE MP, Chairman, Culture, Media and Sport Committee

Engineering switchover

The technical work required to achieve digital television switchover was one of the biggest projects in UK broadcasting history. More than 1,150 transmitting stations had to be upgraded to deliver new high-power digital signals to virtually every home in the UK.

Three organisations led different strands of work in this area. Ofcom was responsible for the planning and international co-ordination of spectrum – ensuring the most efficient use of scarce airwaves and that the ‘digital dividend’ of 14 UHF channels were released for new uses. Arqiva was responsible for carrying out the work at transmitter sites. The Digital UK broadcast team took the lead in co-ordination and overall project management.

Planning the upgrade was a task of enormous complexity. Multiple public and private sector organisations were brought together to shape the project, from calculating the most efficient use of spectrum to scheduling the build of new transmitter sites. The goal was to completely re-engineer the terrestrial TV network serving 26 million households without causing disruption to people’s everyday TV viewing.

Preparing the ground

The UK’s terrestrial broadcasting network of transmitter sites evolved over decades as analogue TV coverage was gradually extended to reach all corners of the country. The challenge posed by switchover was to re-engineer the entire network in just five years, matching analogue coverage which was available to 98.5 per cent of households.

The broadcasting plan had to take account of the fact that every transmitter site is different.

The antennas on top of every mast are unique and designed to take account of a number of factors, including the required coverage, local topography and potential for interference from home and abroad. Specialist teams at Ofcom, the BBC and Arqiva spent many years planning the most efficient use of broadcasting spectrum and negotiating international agreements which would underpin the roll out of high-power digital terrestrial signals. These and other factors multiplied by the sheer number of sites involved made the design and implementation phase of switchover extremely challenging.

To manage the process, Digital UK, the broadcasters and network operator Arqiva, collaborated to ensure that all the specifications were met at each stage of the design process. This work was supported by a new database which managed all of the work required for the engineering part of the switchover programme. Containing some 10,000 documents, it became the central point of reference for all site specifications and all versions of roll-out plans and will continue to be used in ongoing management of the terrestrial network.

Enormous credit must go to Arqiva and its contractors for delivering the network upgrade. Despite potential and actual problems (*see Warblers, weather, fire and feeders, page 20*), every site was upgraded within the specified timescale and every switchover happened on its due date. At a number of sites new masts had to be constructed to carry high-power antennas. Working at heights of 1,000 feet or more and in remote, exposed locations, the construction of these new masts was an engineering feat in itself.

31

MARCH
2010

Wales becomes
the UK’s first
digital TV nation

Specialist helicopters were used by engineers to ensure transmitter upgrades were completed on time. **Photo:** Arqiva

22
JUNE
2011

Scotland
completes
the change
to all-digital
television

The use of helicopters to lower new antennas weighing several tons into position at the top of masts was just one example of the bold innovation which Arqiva brought to the programme and which saved significant amounts of time and money. A short video showing how helicopters were used to install antennas can be seen at digitaluk.co.uk/helivideo

Information for viewers

Digital UK's broadcast and communications teams worked closely to help create two important communication tools used to support viewers through the switchover process. The first was the Digital UK Postcode Checker, developed in conjunction with the BBC. From basic beginnings, the online tool steadily

Warblers, weather, fire and feeders

As with any programme of this magnitude and complexity, a number of issues arose during its implementation, ranging from technical failures to Arctic weather conditions which brought transmitter works to an abrupt halt.

- When one of the first switchovers was completed in the Scottish Borders, some brands of set-top box failed. The fault was soon traced to a particular issue with shared software components made by a company in Turkey. Digital UK and the manufacturers worked together over several days to manage enquiries from viewers and to broadcast an over-air download which fixed the problem.
- In preparation for building a new relay transmitter for Skelmersdale in the Granada TV region, a bird and landscape survey was undertaken. It revealed the presence of a nesting grasshopper warbler on the proposed site. The transmitter build programme was delayed beyond the nesting season but still completed just in time for switchover.
- During the winter of 2009/10, Arctic conditions saw several feet of snow deposited across much of the UK. Conditions were especially bad in Scotland where engineers had been preparing TV masts for switchover.



A grasshopper warbler.

grew in sophistication to provide detailed coverage information for every postcode in the UK. The checker provided viewers with a wealth of address-level information including:

- Reception information for all Freeview channels and alternative platforms available
- Alternative transmitters predicted to serve an address
- Aerial information and details of any predicted changes to Freeview reception
- Dates when viewers may need to retune

The postcode checker was shared with other organisations such as Freeview and BT and was

The duration of the extreme weather had a significant impact on the original timetable but thanks to contingency time built into the schedule, completion was not adversely affected.

- New antennas at the Oxford transmitter were being tested in 2010 when they overheated and caught fire, blacking out television services for nearly a million viewers until back up arrangements could be implemented a few hours later. Replacement antennas, manufactured in Australia, were ordered and fitted within a few months allowing Oxford to switch on time in 2011.
- A few months before London switchover in April 2012, a fault was discovered with the Crystal Palace main feeder cable which carries signals to the top of the mast. While contingency plans were put in place to use reserve antennas if the problem could not be rectified, a new feeder cable weighing several tons was shipped from Germany, fitted, tested and brought into service in time for switchover.

extensively used by viewers, electrical retailers and by aerial installers to check coverage and technical information. Over the course of switchover, more than 60 million checks were carried out.

Digital UK also worked with the broadcasters to pioneer the use of on-screen messages to inform viewers about switchover. These messages were broadcast from transmitters to both analogue and Freeview viewers, providing highly targeted communications which research showed to be extremely effective. On-screen messages will continue to be used by Digital UK and the broadcasters to inform viewers about future changes to their TV services during 2013.

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Postcode checker results Detailed view Print

Results for

2 Whitefield Road, Tunbridge Wells, TN4 9UB

Re-tune required on 17 October 2012.

This address is predicted to receive a good terrestrial TV signal from the Tunbridge Wells transmitter in the Meridian TV region. Your local BBC news service is South East Today and Meridian Tonight for ITV.

Your re-tune dates and available channels depend on which transmitter you are receiving your television signal from.

Check other transmitters which serve this address Change address

Check all re-tune dates

Detailed view

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FAQs

- How do I re-tune my set-top box?
- Will my VCR/DVD recorder work after switchover?
- Is digital television the same as High Definition TV?
- If I don't do anything, will I lose my television?
- Do I need to buy new TV?
- Is there any switchover related engineering work affecting my transmitter?

Channels available at your address Click to expand

Today	Future
9 Oct 2012	17 Oct 2012
No re-tune required	Freeview TV guide update. Re-tune from last time on or after 17 Oct
Standard reception forecast	Good reception 76 channels
HD forecast	Good reception 5 channels

	Name	Region	Parent Transmitter	Grid Reference	Distance (km)	Bearing	Switchover Step 1	Switchover Step 2	Aerial Group Before	Aerial Group After
Most Likely Transmitter	Tunbridge Wells	Meridian	N/A	TQ 60735 43955	4	38	30 May 12	13 Jun 12	E V	B V
Alternative Transmitter	Crystal Palace	London	N/A	TQ 33940 71220	39	321	4 Apr 12	18 Apr 12	A H	A H
Alternative Transmitter	Reigate	London	Crystal Palace	TQ 25640 52137	34	289	4 Apr 12	18 Apr 12	A V W V	CD V W V
Alternative Transmitter	Forest Row	London	Crystal Palace	TQ 43862 36290	15	252	4 Apr 12	18 Apr 12	E V	E V
Alternative Transmitter	Dover	Meridian	N/A	TR 27399 39725	69	90	13 Jun 12	27 Jun 12	CD H	CD H
Alternative Transmitter	Midhurst	Meridian	N/A	SU 91222 24999	89	256	29 Feb 12	14 Mar 12	CD H	CD H
Alternative Transmitter	Heathfield	Meridian	N/A	TQ 56580 22074	19	184	30 May 12	13 Jun 12	K H W H	B H
Alternative Transmitter	Bluebell Hill	Meridian	N/A	TQ 75738 61345	27	40	13 Jun 12	27 Jun 12	W H	B H E H

Coverage prediction

Channel Served Marginal Good reception Variable reception Poor reception

Tunbridge Wells

Step	Date	BBC A	D3&4	BBC B HD	SDN	ARQ A	ARQ B
Now	9 Oct 12	52	100	100	49	100	100
Re-tune event	17 Oct 12	52	100	100	49	100	100
Final situation	Oct 13	52	100	100	49	100	100

Crystal Palace

Step	Date	BBC A	D3&4	BBC B HD	SDN	ARQ A	ARQ B
Now	9 Oct 12	23	95	100	28	99	100
Re-tune event	17 Oct 12	23	95	100	28	99	100
Final situation	Oct 13	23	95	100	28	99	100

Reigate

Step	Date	BBC A	D3&4	BBC B HD	SDN	ARQ A	ARQ B
Now	9 Oct 12	60	57	53	21+	4	89
Re-tune event	17 Oct 12	60	57	53	21+	4	89
Final situation	Oct 13	60	57	53	21+	4	89

Dover

Step	Date	BBC A	D3&4	BBC B HD	SDN	ARQ A	ARQ B
Now	9 Oct 12	50	25	54	51	50	64
Re-tune event	17 Oct 12	50	25	54	51	50	64
Reception change	Jun 13	50	54	54	51	54	54
Reception change	Oct 13	50	25	54	51	50	64

Heathfield

Step	Date	BBC A	D3&4	BBC B HD	SDN	ARQ A	ARQ B
Now	9 Oct 12	52	99	99	49	99	99
Re-tune event	17 Oct 12	52	99	99	49	99	99
Final situation	Oct 13	52	99	99	49	99	99

Digital UK's online postcode checker allowed people to see their options for digital TV and predicted Freeview coverage before and after switchover. A detailed view showing more information and alternative transmitters for their address was also available for more technical viewers.



Peter Heslop,
Arqiva

Building relationships

Before any switchover engineering work could take place, many organisations had to collaborate on plans which would underpin the entire programme, from international negotiations on spectrum planning to the regional timetable for rolling out the changes across the UK.

The parties included all the main UK broadcasters and operators of the six national digital multiplexes, which bundle and broadcast Freeview channels. Arqiva, as the owner and operator of the transmitter network, played a pivotal role in all aspects of planning and delivery, notably across antenna design which was central to the programme at all main sites, and in meeting the challenging timetable of transmitter upgrades.

At the outset of the planning process, no proper forum existed where agreement on shared infrastructure could be reached. Digital UK led the creation of the necessary groups to secure cross-industry agreement on how to tackle the technical complexities of switchover and where necessary the commercial arrangements.

This process was not always easy. Tried-and-tested relationships between the network operators and the broadcasters had to be put on a new footing and adapted to the newly-formed Digital UK taking a leading role. The broadcast team worked tirelessly over the early years to gain the trust of the organisations involved, many of whom were not used to working with parties where no contractual obligations existed.

Laying these firm foundations paid dividends later, enabling new and productive relationships to be formed and Digital UK to become an integral part leading and co-ordinating the switchover process. Together the organisations broke new ground in how broadcast engineering plans were developed and tracked, notably in the use of new databases. A plan for delivering switchover was agreed and announced by the government in September 2005. Switchover would be rolled out by TV region, starting in Border in 2008 and completing in Northern Ireland in 2012. This initial plan formed the building blocks of the switchover programme and provided a stable basis for all subsequent developments.



In the months which followed, the broadcasters, Digital UK and Ofcom formed a wider group to further develop the plan. During the course of switchover, the group continued refining the model to maximise coverage, mitigate any losses of coverage and to take account of the evolving nature of the international agreements and engineering considerations.

The Digital UK team also played an important role in supporting the broadcasters and Ofcom in negotiation with government on the regional-roll out timetable. A key consideration was ensuring there was sufficient contingency to allow the engineering work to be completed without changing published switchover dates, which would have led to viewer confusion and undermined confidence in the programme.

This contingency proved vital in allowing for the impact of bad weather and other problems affecting the build programme. It also meant that everyday viewing and major broadcasting events, from general elections to the London Olympic and Paralympic Games, could all be enjoyed by the public, uninterrupted by the massive programme of engineering work going on behind the scenes.

Digital TV switchover in the UK has been a phenomenal success. By the autumn of 2012, Arqiva had completed a seven-year programme during which every one of more than 1,150 hilltop transmitting stations has been successfully converted from analogue to digital while maintaining services to viewers throughout.

Since 2007 we have built five new major TV masts, extended or upgraded the remainder, and installed more than 300 new antenna systems. We have removed more than 5,500 existing transmitters, and in their place installed and commissioned more than 3,700 new digital systems. Our overall investment of nearly £630 million has included some 1,200 man-years of work.

Some of the engineering and logistical challenges faced by the Arqiva teams have been breathtaking. We pioneered the use in the UK of special heavy-lift helicopters, and worked through disruption caused by exceptionally bad weather and Icelandic ash clouds, but have nevertheless taken the time to protect and work around sensitive flora and fauna at our remote rural sites.

The UK is now truly digital and 98.5 per cent of homes can now receive multi-channel digital terrestrial TV with widescreen and HD capability. I am proud to have led the project on updating and transforming our critical national infrastructure, completed on time and within budget.

Peter Heslop, Director, Digital Switchover, Arqiva



The viewer experience

4

APRIL
2012

According to the headlines, it would never work. Turning off the analogue TV system in use for more than 70 years and replacing it with new, digital signals would lead to chaos. Millions of viewers across the UK would be left staring at blank screens in place of *Coronation Street*.

When the planning for switchover began, no similar projects had been completed anywhere in the world. One industry expert called to give evidence to a House of Commons Culture, Media and Sport Select Committee in 2005 declared the idea ‘more complex, with more potential for chaos and consumer revolt than any other civilian project in our history, including North Sea gas conversion and decimalisation’¹. There was a genuine risk that people may not understand the benefits of switchover or what they had to do. In addition, many would need to buy new TV equipment. In April 2005, research indicated one-third of homes (nearly nine million households) only had analogue TV, including half of all those aged 75 or more. More than a third also thought switchover was ‘unfair or unjust’, and five per cent said they would never switch to digital TV.²

In short, the scale of the challenge could not be overestimated. The media was quick to feed off this anxiety with one national daily newspaper declaring across its front page that the switch to all-digital TV would be ‘a disaster’.

Successfully preparing households for the biggest change to television since the introduction of colour would take far more than a traditional information campaign. It required the right consumer insight to persuade those who were most resistant to the change, and a full-scale

national and local multimedia campaign to drive awareness and prompt action. It also needed to move beyond traditional media to reach the more isolated and more vulnerable viewers. It was clear from the outset that switchover was in the public spotlight, so the communications planning would also require engagement with the media, politicians, local government and industry.

Charged with this task, Digital UK developed a comprehensive public information campaign for all viewers – including those eligible for the Switchover Help Scheme – to ensure their experience of switchover was as straightforward as possible.

Shaping the campaign

While initial advertising for switchover ran nationally to give people early warning of the change, the project itself was designed around the 15 ITV regions. This would mirror the regional phasing of engineering work to upgrade more than 1,150 transmitters across the UK (*see Engineering switchover, page 18*). Not only would this provide the flexibility needed to give viewers specific information about switchover in their area, but also the public were far more likely to engage with communications tailored for local audiences than a national campaign driven from London. Research also indicated that people wanted help with the change, not simply to be told the benefits of digital TV.

Each regional campaign began with the publication of timings for switchover. To ensure confidence in the programme it was critical that once dates were released into the public domain they would never be changed.

Switchover begins in London, the largest TV region



1) David Elstein, former Chief Executive Officer of Channel 5, 2005

2) Ofcom tracker survey and DTI Generics research 2005

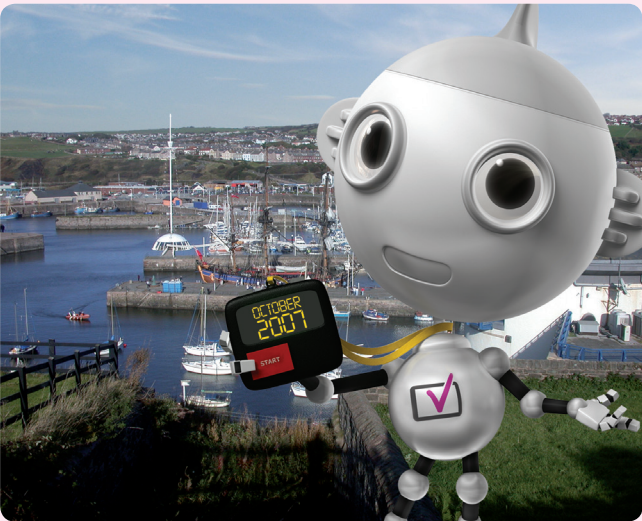
One of the strengths of the communications campaign was its combination of consistency and flexibility. For example, at the start of the programme, local communications were phased over two years. As switchover gathered pace and viewer comfort with the process increased, this was gradually reduced to a shorter, sharper six-month campaign model, which saved money and was more in tune with how viewers wanted to receive information. However, the core mix of communications was kept constant, delivering consistently high levels of public awareness and understanding.

Another key to success was the creation of easily recognisable branding and clear, simple

consumer messages which could be shared with partners such as retailers and the digital TV providers, providing an all-encompassing approach.

The campaign, which spanned TV, radio, leaflets, outdoor, print, and online advertising, was divided into three main stages. The first was designed to raise awareness of the switchover. The second was aimed at making sure existing Freeview viewers realised they would be affected (and would need to retune their TVs). The final step was to drive action, reinforcing the date and retuning messages. Advertising to promote the BBC-run Switchover Help Scheme was targeted to eligible groups throughout the campaign.

extremely popular and were subsequently rolled out across all regions. Following feedback from local viewers, the transition period within the two-stage switchover process was also reduced from four to two weeks.



Featuring robot Digit Al, Digital UK’s communications campaign prepared viewers in Whitehaven for the first switchover in October 2007.

Roadshows featuring trained advisers and practical demonstrations of digital television equipment proved

Leaflets providing detailed information on switchover were sent to homes three months before the first analogue signals were turned off

As seen on screen

The switchover campaign pioneered the use of on-screen messages to reach both analogue and digital viewers. These highly targeted communications, developed in conjunction with the broadcasters, proved critical in areas with multiple dates where homes could receive a signal from more than one transmitter. In some cases, houses on the same street were served by different transmitters and therefore had different switchover dates. On-screen captions ensured viewers knew exactly when changes were happening at the transmitter they were watching.

Leaflets providing detailed information on switchover, including all the options for digital TV, equipment issues and retuning, were sent to homes three months before the first analogue signals were turned off. Viewers would find more general guides in libraries and specially designed information packs encouraging children to learn about switchover were made available to schools. All of Digital UK’s communications featured Digit Al – the robot mascot designed to be the friendly face of the campaign (*find out more about him on page 29*).

Despite the complexities of communicating up to 18 different switchover dates in a region, the campaign model proved extremely effective. Rolling research throughout the programme



On-screen messages were delivered to both analogue and digital viewers.

indicated virtually all viewers in each area were aware of switchover and had converted their main TV to digital before the first analogue signals were switched off. In reality, most homes had converted every set before switchover and two weeks after all homes contacted were watching digital TV.

Supporting viewers

Alongside advertising and leaflets, viewers could get direct support from Digital UK’s advice line (08456 505050) and website (digitaluk.co.uk).

The Digital UK website provided information on all aspects of the programme, from details of the policy and timing in each region to frequently asked questions and more practical help, including short videos on retuning and troubleshooting tools. It was also home to a postcode checker, which let viewers check the options for digital TV in their area and the predicted Freeview coverage and channels available at their address. With the rise of social media, Facebook and Twitter were also used to provide information and respond directly to questions from viewers. In total 17 million people used the website.

As the programme continued through the regions, around one per cent of homes in each area typically contacted Digital UK’s advice line at each stage of switchover – mostly for information on retuning Freeview equipment. This was especially true in the Granada, Central, Yorkshire and Anglia regions, where viewers may often receive more than one regional service due to overlapping signals from neighbouring transmitters.

Throughout switchover people have contacted the advice line with a variety of enquiries, ranging from basic to highly technical. Trained advisers



Digital UK's campaign included advertising for the Switchover Help Scheme.

Find out more at
digitaluk.co.uk/insights

have helped millions of viewers with everything from simple retuning to diagnosing complex aerial and reception issues. Mystery shopping research consistently showed callers received a good service, with clear and straightforward advice to make switching to digital as simple as possible. For more about the advice line see *Digital UK's advice line – the inside story, page 31*.

Viewers could also get face-to-face advice. Digital UK and the Switchover Help Scheme jointly hosted more than 2,000 roadshows across the UK, allowing people to put questions to advisers, see practical demonstrations and in some cases even have their picture taken with Digit Al. In some areas, where there were high concentrations of minority ethnic audiences, roadshows were supplemented by street teams which distributed translated leaflets in public places. In total, these public events helped around 580,000 people prepare for switchover.

On the ground

While switchover was a national programme, for viewers it was a very local event. Households watching terrestrial TV were only affected when their particular transmitter switched. It was therefore decided at an early stage that each region would need a small team on the ground to become the face of switchover for their area. Local knowledge and direct contact with the public were vital to ensure the campaign remained relevant and could adapt to reflect the communities concerned.

Local teams representing Digital UK and the Switchover Help Scheme became part of local life up and down the country. Regularly appearing on TV, radio and at events to answer questions and provide information, they worked closely with local councils, housing providers, politicians, retailers, trading standards and other

organisations to prepare their communities for the day when analogue TV signals were switched off.

In Scotland's more remote areas, this ability to reach small communities was particularly important. The team instigated a programme of hundreds of community events across the country, including a series of events held in Gaelic. They dressed as Vikings to promote switchover at the Up Helly Aa festival in Lerwick (see pic, page 13), teamed up with the grandson of television inventor John Logie Baird to find Scotland's oldest TV and even joined forces with local legends Lorraine Kelly and the Loch Ness Monster.

Getting the message to other corners of the UK proved equally entertaining as teams presented and gave advice at county shows, village halls, parish council meetings and everywhere in between. Journeys through sun, snow and storms by car, train, fishing boat, ferry, bicycle and moped were undertaken on a regular basis.

Reaching out to the community

The work of these small teams was amplified by a network of local charities, recruited through a pioneering initiative established by Digital UK in 2008. The aim was to harness the reach of community organisations to provide advice, reassurance and practical help to those who may need it.

The initiative began when Digital UK brought together Age Concern England, Help the Aged, Community Service Volunteers and Collective Enterprises Limited to consider the best way to support viewers who may need extra help to manage the switch to digital TV. Together, these organisations joined forces to create a new organisation, Digital Outreach Ltd, which was initially contracted by Digital UK and later the Help Scheme, to provide an extra layer of support for viewers.

Digital Outreach provided leading charities in each region with the tools and training needed to help people through switchover and to provide advice about the Switchover Help Scheme. These lead charities in turn disseminated switchover information to a wider network of organisations and oversaw the recruitment and training of volunteers who collectively helped reach some of the most isolated viewers. Small grants were made available to help fund activities such as switchover-themed coffee mornings and lunch clubs.

In total, more than 12,000 charity staff and volunteers organised 14,000 events and provided switchover advice to 700,000 viewers.

While switchover was a national programme, for viewers it was very much a local event. Households were only affected when their transmitter switched

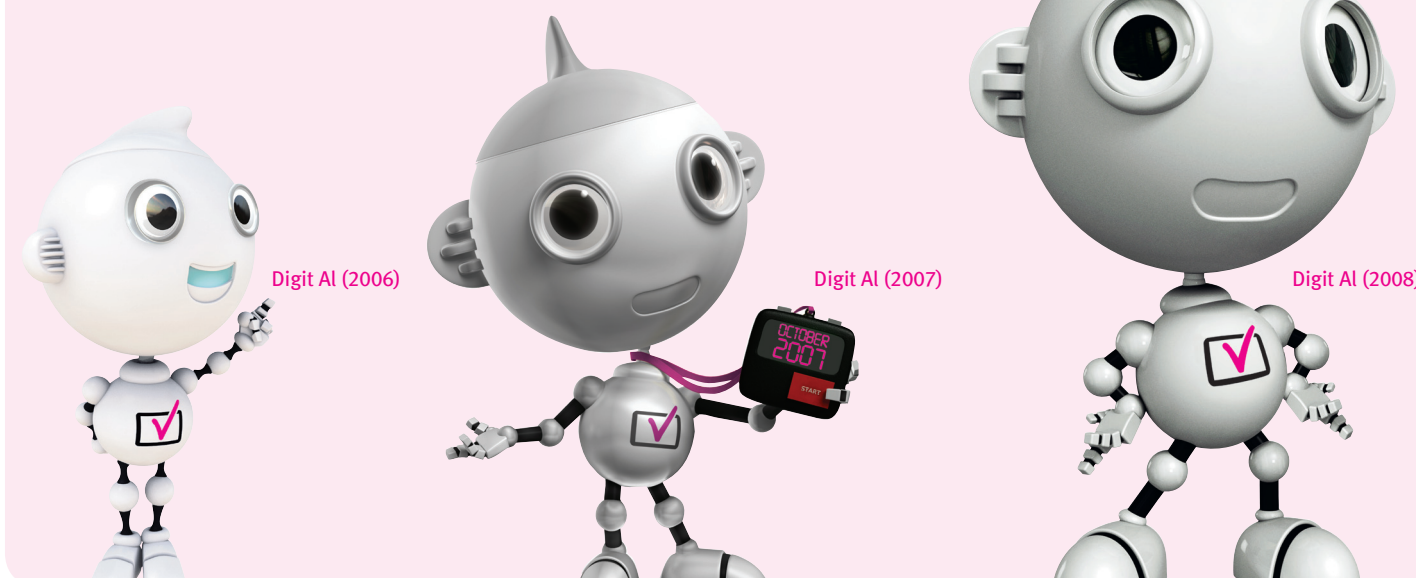
Meet Digit Al

Developed for Digital UK by advertising agency AMV BBDO, Digit Al was the friendly face of the switchover campaign. The robot mascot was originally designed to appeal to those who may have felt less comfortable with technology, especially the elderly, but quickly became a firm favourite with viewers of all ages.

Joining forces with award-winning animators Aardman, 'Al' first appeared on screens in October 2006 – voiced by Little Britain star Matt Lucas. Since then his adventures

have seen him paddling a punt in Cambridge, herding pink sheep in Cumbria and even riding the Central Line on the London Underground.

While Al's appearance evolved over the course of the campaign his message remained the same: ensuring viewers in each region were ready and had the help they needed for the day analogue signals were switched off.





The ‘digital tick’ logo helped viewers identify equipment and services that would work through switchover.

Media and politics

Switchover, as with all high-profile public projects, has been constantly under scrutiny from the media and politicians. The announcement of a pilot for the programme in Whitehaven, Cumbria (see *Whitehaven: the first switchover*, page 26) led to a considerable surge of interest and this continued throughout the main programme as each TV region switched to digital.

Inevitably with a project of this scale, there was the odd dramatic headline, particularly ahead of some early switchovers, with one national Sunday newspaper predicting ‘TV Blackout Chaos’ the weekend before the process began in the West Country. However, once the smooth transition from analogue to digital broadcasting was completed in Whitehaven in 2007, most national media outlets simply kept a watching brief. Regional media, as expected, was more engaged, providing an invaluable source of information for viewers. A steady stream of stories, features and phone-ins helped reinforce the advertising campaign and helped build awareness of when switchover was taking place and what viewers needed to do. Analysis of media coverage over the course of the switchover programme showed that more than 90 per cent of items were either factual or positive in tone.

In parallel, a communications campaign was conducted with MPs and other elected representatives across the UK to reassure them that switchover would run smoothly and that their

constituents would be supported throughout. With Whitehaven in his Copeland constituency, Jamie Reed MP became an early champion for the project, not only chairing the Digital Switchover All-Party Parliamentary Group (APPG) and sponsoring parliamentary events but also becoming something of a digital television expert himself.

By the end of the programme, the number of MPs raising concerns on behalf of their constituents was very low and the overall parliamentary mood towards switchover relaxed. Several members have been extremely supportive of switchover, sponsoring regional briefing events in parliament, visiting roadshows and including information on websites and in newsletters.

Housing, retail and manufacturers

As the switchover campaign moved through the regions, awareness of the programme and take-up of digital TV were notably lower among tenants living in flats. To address this, Digital UK developed a communications strategy and dedicated website for property managers and tenants, along with a series of advisory leaflets and good practice guides. Housing providers were offered briefings on preparing communal TV systems and free training for frontline staff to help them prepare for questions from tenants. Organisations with plans in place three months before switchover could apply for the ‘Homes set for digital’ certification mark. As a result of this activity, all social housing providers in each region reported that they were ready at least one month before switchover began.

Digital UK Budgets	Original Budgets (£ Millions)	Forecast Final Cost (£ Millions)	Forecast Underspend (£ Millions)	Forecast Underspend Percentage (%)
Communications	200.8	126.5	74.3	37%
Operations	30.8	30.8	-	0%
TOTAL	231.6	157.3	74.3	32%

Digital UK’s advice line – the inside story

Digital UK’s switchover advice line was the lynchpin of a range of services to support viewers. Staffed by a core team of 45 advisers (expanding to nearly 700 at peak times), agents were provided with ongoing technical and communications training to ensure viewers received the best possible advice. Over the course of the programme, two million calls were received.

The range of support available to callers was extensive. Use of recorded messages was kept to a minimum with the vast majority of callers put through directly to an adviser. Detailed advice, including step-by-step guidance on retuning and troubleshooting, was provided, backed up by email and webchat support.

The service was also adapted for particular requirements in a region, such as offering support for ethnic minority languages in areas such as London, and provided a dedicated number for aerial installers, retailers and housing managers. This priority line was staffed by experienced agents able to liaise with Arqiva, the network operator, over issues such as network outages or equipment and signal issues.

While the advice line was run in partnership with MGt, based in Kirkcaldy, Scotland, the team there quickly became part of the Digital UK family. Highly engaged and committed to switchover, many involved at the start of the programme in 2008 were still supporting viewers for the UK’s final switch in Northern Ireland in October 2012. Such was their support for switchover that a number of them volunteered to work with local charities and roadshows when analogue signals were turned off in their home areas. One team leader even

volunteered to spend his 60th birthday away from home supporting additional temporary advisers in Liverpool as four million homes switched in one day.

Other examples of staff going the extra mile include advisers carefully relaying retuning instructions to a five-year-old girl who was the only member of her family to speak English, and, at the other end of the spectrum, staying as long as it took on the line with a 102-year-old caller who was hard of hearing until they were absolutely sure she had her channels back.

The same team will continue to offer advice to viewers throughout 2013 as airwaves are cleared to pave the way for the next generation of mobile services.

Many of the advisers involved at the start of the programme in 2008 were still supporting viewers for the UK’s final switch in Northern Ireland



The last remaining analogue channels are turned off in England

The Digital UK advice line handled more than two million calls from viewers.

All social housing providers reported ready at least one month before switchover began

Many viewers naturally turned to their local electrical retailers for advice on digital TV. Given this, a strong partnership with this sector was essential. Dedicated Retail Support Executives were assigned in each TV region to advise local retailers, train staff and provide point-of-sale materials featuring the ‘digital tick’ logo. This government-developed mark was administered by Digital UK to help retailers to give customers confidence that they would receive accurate advice when buying.

Stores were invited to sign up free for the Digital Logo Scheme, allowing them to display the logo and receive training at regional and branch level. Viewers looking for new equipment or with questions would then find Approved Digital Advisers able to guide them. By 2012, more than 7,000 retailers had signed up and 13,000 staff had qualified as advisers. Digital UK’s work in this area won the award for Most Effective Retail Training at the 2009 Field Marketing & Brand Effectiveness Awards.

Leaflets explaining switchover and what viewers needed to do to get ready were sent to every home in the UK. A reminder supplement also ran in local press across each region one month before the first analogue signals were turned off.



Manufacturers and aerial installers were also supported across the programme with regular newsletters, technical information and face-to-face briefings. Products and services designed to work through switchover could display the ‘digital tick’. By the end of 2012, 65 trade briefings had been held around the UK and approximately 130 manufacturers had developed and registered more than 4,000 TVs and digital boxes, recorders and aerials.

To acquire the logo, products needed to pass rigorous tests developed by government and the Digital TV Group (DTG), which sets the technical specifications for Freeview digital television equipment. The DTG worked closely with Digital UK throughout switchover and provided support for any issues that occurred regarding compatibility with new services or signals.

Aerial installers who received Registered Digital Installer (RDI) status were also entitled to use the ‘digital tick’ logo to show they were a trusted source of help and advice through switchover. Digital UK recommended viewers to look for an RDI in their area, or a member of another recognised trade body such as the Confederation of Aerial Industries (CAI).

A digital dawn

On 24 October 2012, the last analogue TV signals in Northern Ireland were turned off marking the completion of the UK’s five year switchover programme and finally extending coverage of Freeview channels – including free high-definition services – to virtually all homes. Despite some initial scepticism and the complexity of the task, the biggest change to TV in a generation had gone smoothly and for most viewers the transition was relatively straightforward.

Of course, switchover benefited in no small part from the British public’s love affair with television and the rise in popularity of flat screen TVs. Between 2008 and 2012, more than 80 million digital TV products were sold across the UK. However, it was the local focus of the campaign, with direct support from organisations at the heart of the communities in each region, which truly helped the process to go as smoothly as it has. While switchover was a national programme, it felt like a local event to viewers.

The Digital UK and Switchover Help Scheme communications campaigns won the Institute of Practitioners in Advertising (IPA) Gold Award for Marketing Effectiveness and the Best Channel Planning Award in October 2012.



Dianne Jeffrey
Digital Outreach

Digital Outreach was established as a charity/private sector social enterprise by Age Concern, Help the Aged, CSV and CEL to provide extra support to viewers through switchover.

Our small but highly effective team ensured consistent delivery of this help across the 15 TV regions, working with and through hundreds of organisations across the UK.

Digital Outreach’s embedded model cascaded training, funding and grants to the local and grassroot levels, enabling the important trusted voices in our community to do what they do best – sharing essential public information, in familiar surroundings, with people who otherwise might not engage with the campaign.

Importantly, this legacy continues as our partners remain working in their community after switchover has completed. A measure of the strong working relationship we have developed is that many of our local partners are keen to work with us again, and we are already working with them and new partners on similar projects around health awareness, digital inclusion and in the utilities/resource efficiency sector.

On behalf of the Digital Outreach team, I would like to thank all our voluntary and community sector partners. Without their energy, vision and involvement, we would not have reached the number of people we have – some 700,000 – embedding information about switchover into their knitting groups, bingo sessions, keep fit classes, reading groups, IT classes, art classes and lunch clubs to name just a few. It takes a lot to open your doors on the day of switchover and provide help and support (and excellent cake!), always with a smile, to any visitor who turns up. To their staff and volunteers in nearly 350 advice points hosted across the UK, serving over 34,000 visitors, thank you.

Dianne Jeffrey CBE DL, Chair, Digital Outreach

Viewer research

Throughout switchover Digital UK tracked public opinion on the programme in a number of ways. We monitored viewers' attitudes towards the project through monthly research and the levels of complaints and compliments received, the tone of media coverage and informal feedback from our teams on the ground.

While this provided reassurance that most viewers found switchover straightforward, we wanted to know more about those who may have found it more challenging. Research specialists Blinc were asked to explore the mood among those who made the transition to digital TV later than most, sometimes waiting until the last minute.

Researchers undertook face-to-face interviews with hundreds of viewers across several regions over a six-month period. They also interviewed members of our advice line and roadshow teams.

One common reaction was that even for those converting to digital TV relatively late, the process was less disruptive or complicated than they anticipated. As one viewer put it: 'The anxiety is much worse than the reality – it builds up for a while before it, but it goes as soon as the day arrives,' while another said: 'It sounded like it would be a complex procedure but it's not really – it's relatively simple.'

For others, the change to their television arrangements coupled with the need to get to grips with unfamiliar technology was tough: 'I felt as if I was in the cockpit, the pilot had died and I had no idea how to fly the plane. The advice line talked me down.'

Agents from the advice line would spend as long as necessary with struggling viewers and the research provides a salutary reminder that the loss of TV services can be highly traumatic for some. One adviser recalled helping an elderly viewer from Salford who couldn't retune her set: 'She didn't want to break her TV – I persuaded her that she wouldn't, and talked her through the process. Half an hour later, she got her channels back and realised she was going to be able to watch her favourite programmes that evening – she started crying.'

Similarly, switchover roadshows were a vital element of the support package and being able to offer practical demonstrations was invaluable according to team members. One described an elderly resident of a sheltered housing complex in the Midlands who expressed her anger at the prospect of switchover: 'She was having sleepless nights about it. We wrote down the details and showed her how to do it on the demo TV. Three hours later she came back and said she was teaching the rest of the ladies to do it.'

The research confirmed what we had anecdotally known to be true – that friends and family were the primary source of help for many and neighbours often came together to help each other. One interviewee said: 'In my street there were three ladies who are well over 70. We were all talking, and if someone said Addie down the road needs a bit of help, somebody would go and help – people started talking to each other a lot more than before.'

Once helped through the process of switching, some viewers take their time to explore the benefits of digital TV and the desire to move beyond the five main channels is initially limited. Over time, however, most discover extra enjoyment from an expanded line-up. Easier recording, plus-one channels, radio on the TV and the ability to pause live programmes were also features late converts to digital were found to be enjoying. Many also found their TV reception improved – 'Until now the reception was so poor that we felt we were in the dark ages – we've joined the world again!'

Luke Meddings who led the research, said: 'For many, switchover represented a de facto but none-the-less unique opportunity to take a step forward in terms of adopting a new technology. The viewers we spoke to may not have initiated it independently, but they are happy with the results.'

The full findings of the research by Blinc can be found at: digitaluk.co.uk/insights



Even viewers who needed extra advice generally coped well with the switch to digital TV.

The Switchover Help Scheme



Peter White
Switchover
Help Scheme



It's been a huge privilege to lead the Switchover Help Scheme right from its beginnings in Whitehaven in 2007 to the final stages in Northern Ireland. Our mission has been to offer all eligible older and disabled people practical help to convert one of their TVs at switchover. In 2005, the government announced the Help Scheme with the aim of leaving no-one behind at switchover.

We were determined to deliver help which would reach and serve the most marginalised and isolated, those who are hardest to reach and who are often beyond the day-to-day reach of statutory agencies. We would not have been able to achieve this without the generous help of thousands of local volunteers, individuals and organisations. They instinctively understood the importance of TV in people's lives and offered their time and their networks to engage some of the most vulnerable in our society. A key part was also played by the hundreds of dedicated staff, suppliers, call centre agents and installers who did their utmost to deliver a high-quality service accessible to everyone. We continued to listen and to learn so that we could improve the engagement and delivery of the Help Scheme as we went along. It was this big team effort which made switchover easier for more than 1.3 million older and disabled people. A big thank you to everyone who was part of this Help Scheme team.

*Peter White, Chief Executive,
Switchover Help Scheme*

The Switchover Help Scheme has been run by the BBC under an agreement with the government. It offered eligible older and disabled people practical help to switch one of their TV sets to digital. The help included easy-to-use equipment, installation, and 12 months free aftercare. People were eligible if they were aged 75 or more, eligible for certain disability benefits, living in a care home long-term, or registered blind or partially sighted. More than seven million households were offered this help. Most were asked to contribute £40, with eligible people also on income-related benefits offered the help free.

Early on in the planning stage, government realised older and disabled people would benefit from practical support through switchover. Among eligible people a minority faced significant multiple challenges to a successful switch. The people most likely to struggle with technical change would also include those least able to engage with official help. They might be isolated, bereaved without friends and family, or suffering from mental illness and a chaotic lifestyle. Ironically, they were also likely to be among those who rely most heavily on television for entertainment, information and company. To lose that window on the world would have been a significant loss for vulnerable people.

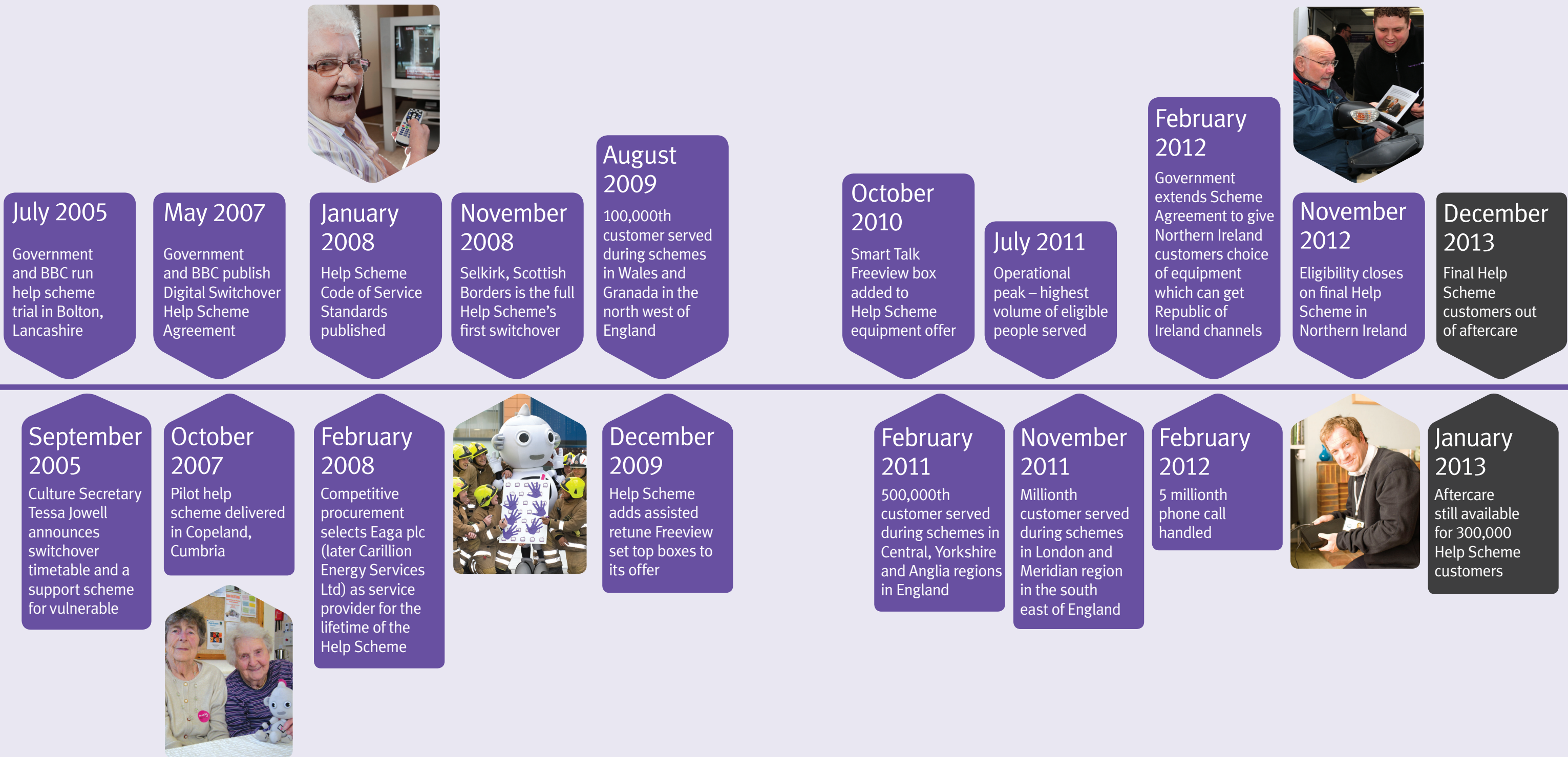
Help Scheme's four success measures, monitored by the BBC Trust

- 1: Encouraging appropriate take up
- 2: Identifying and helping the hardest to reach
- 3: Delivering excellent customer service
- 4: Ensuring value for money to the BBC licence fee payer



Help Scheme Helping Hand volunteers
from Kilmarnock, Central Scotland.

Digital television switchover 2008-2012





Leaving no-one behind

In 2005 Culture Secretary Tessa Jowell announced the Help Scheme alongside the switchover timetable and said it would play a crucial role in making sure ‘no-one was left behind’ at switchover. The BBC Trust agreed that the Switchover Help Scheme should be designed to reach out to all eligible people, including the most vulnerable and the most isolated.

To this end, the Help Scheme consulted experts and carried out extensive and regular research throughout the project on the best approaches and their effectiveness. The result was a multi-layered outreach programme deployed alongside the Help Scheme’s mainstream communications routes of direct mail, advertising and local publicity. Working with Digital UK and Digital Outreach Ltd, the Help Scheme engaged with thousands of charities, voluntary and statutory networks to spread the word about the help available at switchover.

The Help Scheme also developed an innovative ‘communities programme’ with the support of Circles Network, which was aimed at the hardest to reach ‘5 per cent’. These are eligible people without either friends or family or formal care to support them, and who face multiple barriers to managing change in their lives, such as mental health issues, declining health, dementia or deprivation. Research found that these individuals are typical only in their isolation and reliance on a small number of loose social contacts. It was essential to carry out specific activity to reach these people if the Help Scheme was to leave no-one behind.

In the communities programme, the Help Scheme worked through locally-based volunteers to identify people who might hold a critical bond of trust with one of the ‘5 per cent’. These community supporters could be bus drivers, café owners or neighbours. The volunteers would explain how they could help and prompt the supporter to speak to the eligible person about the Help Scheme



Maggie Philbin and the 86th Newcastle Brownie group.

‘One of our community supporters is a community hairdresser who immediately identified someone who fitted the 5 per cent description. Her client was an elderly lady who lost her husband just over a year ago after a prolonged illness. He had previously always taken care of anything technical. Until recently her son had fulfilled this role but he left to live abroad.

The hairdresser mentioned the scheme to her client but she seemed daunted by the thought of getting involved with “technical issues.” The hairdresser persisted and spent some time gently discussing the implications of switchover and the help available during different visits.

The client kept wanting to change the subject. So the hairdresser left a Help Scheme leaflet, which the client picked up and found not as daunting as she had imagined. She found the information easy to understand and surprised herself by telephoning the Help Scheme.

On the next visit the equipment had been installed and the client was very pleased with herself, not only for having secured her television signal but, more importantly, for having reclaimed a little bit of the independence that she had surrendered long ago.’

Community Programme co-ordinator

Every UK local authority contacted

Help Scheme ambassadors

In each region, trusted figures helped to spread the word about the Switchover Help Scheme. Police officers, footballing heroes, charity workers and councillors were among those who lent their valuable support in newspapers and on television. Maggie Philbin, former presenter of Tomorrow’s World, was the Help Scheme’s most frequent celebrity ambassador, leading awareness events up and down the country.

She said: ‘I’ve played my part in the Switchover Help Scheme for more than three years now. In that time I’ve wielded king-sized bookmarks in Cornwall, daubed purple finger paint in the Shetland Islands and rallied blue-faced choir boys on a chilly day in Newcastle. All to one end – to remind everyone that older and disabled people might need a bit of extra support to get used to the technology others already take for granted. And it’s been fabulous to witness the intensity and determination of all the organisations pulling together to make sure the message really got through. I saw fresh ideas at every event, each one building on the last and a genuine desire to find and support the best local communicators. I’ve felt very proud to be part of it all, to see such a good partnership in action and to feel I might in some small way have made a difference.’

23 million	6,000
mailings sent	statutory organisations engaged

Around	
100,000	21,000
community supporters recruited	care homes contacted

6million

phonecalls handled

95,000

calls a week at peak

85%

of calls answered within 15 seconds

Around 19%

of people contacted take up the help



Help Scheme worker Adeola Olabode with viewer Katherine Takitou.

High quality, inclusive service
The touchstone of Switchover Help Scheme service was that no eligible person should feel like they were asking for special treatment. Whatever their disability, age or ethnicity, their needs would be met as a matter of course. For example, all calls went quickly and directly to a person, not through an automated call system, and call centre agents took time to be patient with customers. Installers were trained to understand the requirements of a diverse range of people, such as restoring the position of any furniture in a blind person’s house, or removing their shoes if the person’s faith required it. Criminal Record Bureau checks, security passes and firm appointment booking times reassured eligible people who might otherwise be nervous about letting strangers into their homes.

An important element of the service was the free 12 months aftercare. Eligible people could call a freephone number as often as they liked for advice, and if needed an engineer would return to their home. Most aftercare calls were generated by customers needing help as they got used to their new equipment. The Help Scheme aimed to handle complaints with consistent care and respect and the aim of resolving as many as possible to customers’ satisfaction.

The Switchover Help Scheme’s ‘Code of Service Standards’ was drawn up in consultation with expert organisations and eligible people themselves. Its 91 points were not just aspirations; they were enshrined in the contracts of the Help Scheme’s suppliers and monitored throughout so that delivery could be continuously improved. Peter White said: ‘The Help Scheme’s thousand-strong wider workforce can be rightly proud of the high standards of service that they achieved and the respect and dignity with which they served some of the UK’s most vulnerable people.’ Team Charter awards recognised the individuals who consistently

pulled out all the stops to ensure smooth switchovers for Help Scheme customers.

Easy-to-use equipment
Older and disabled people using digital TV for the first time needed equipment that was as easy to use as possible. The Switchover Help Scheme worked with consumer and disability experts, manufacturers and broadcasters to supply TV digital equipment that was exceptionally accessible. From the start, set top boxes supplied as the Help Scheme’s standard option included specially designed remote controls with buttons that were easy to see and operate, and which installers synchronised with televisions so customers only needed one remote control. People with hearing or sight impairments could access subtitles or audio description with a single button in each case. When it was found some people struggled to retune Freeview boxes at switchover, the Help Scheme worked with manufacturers to introduce an assisted retune feature. This prompted viewers with an onscreen message when it was time to retune, and allowed them to do so with one touch of a button. From its first product release, blind and partially sighted customers were also able to choose a SmartTalk Freeview box which featured speaking menus and programme information so that they could benefit fully from extra digital services.



Help Scheme aerial installation.

Help Scheme customers
I first found out about the Help Scheme when they came to my over-60s club to tell us all about the Scheme. I couldn’t afford to buy new equipment and I wasn’t sure what to do about switching to digital TV or where to get help. It’s wonderful to think that there is help out there for older people like me. Older people have spent a lifetime looking after others and to know that this scheme cares and looks after us makes such a change these days! Everyone at the Help Scheme has been absolutely marvellous. The people on the telephone and the man that came to fit the equipment were very polite and couldn’t have been more helpful.
Katherine Taktikou, 80, London

Everyone I’ve spoken to at the Help Scheme has been so pleasant – from the people answering the phones to the installer who turned up to fit the equipment. I’ve asked lots of questions along the way and they really helped to explain the whole process to me, which was very reassuring for someone of my age. Now I can get on and watch my favourite programmes without the worry of the screen going blank in a few months’ time.
Liz Stanton, 72, Buckinghamshire

The installer password is an excellent idea and comforting. This was easy to arrange with a helpful and sympathetic advisor. The offer to participate in this scheme arrived with plenty of time to accept and the installation was carried out well before the switchover date. The installer had an awkward task to run the wiring to the outside to connect to the aerial. It took longer than might have been normal because he was very careful. It was appreciated that the appointment was made by my choosing and there was the assurance that help could be gained easily if required. The leaflet issued with the original offer was very helpful and definitely informative.
Customer satisfaction survey

I was really impressed with the whole process. Everyone involved knew what people like Mark needed in terms of support and they made it easy for me to manage the process on his behalf. This isn’t something Mark could have done for himself and I appreciate the careful way Mark’s switch to digital has been handled. The whole process worked seamlessly, from identifying Mark as someone who needs this sort of support in the first place, to the installation of his new equipment. We were given several equipment options and, when we had made the right choice for Mark, it was very easy to apply for the help. Mark enjoys his television and it’s important to him. I certainly think he’s going to enjoy the extra channels he now has to play with.
Nick Wilkinson, whose son Mark has learning difficulties, Surrey

More than 7.1million

eligible people contacted

1.3million

people served

Around £340million

returned to the taxpayer

Around £260million

spent

Less than £190

cost per customer

95%

of customers would recommend the Help Scheme to a friend

To learn more:
Switchover Help Scheme lessons learned – go to www.bbc.in/helpscheme

A word from viewers and industry

‘Given the Herculean challenge Digital UK faced in communicating the digital switchover to the population, this campaign represents an extraordinary marketing achievement.’

IPA Awards judge, Catherine Kehoe



‘I was helped by a very patient Emma to tune in my TV. She was so helpful and patient, and I am so grateful.’

Viewer, Meridian

‘I would just like to thank you for the support and advice you gave me while trying to resolve this issue. I was very impressed by your speedy responses. Keep up the good work. I wish other support organisations were as helpful as yours.’

Viewer, STV Central

‘I would like to compliment one of your telephone advisers...she was helpful, efficient, quick and very pleasant. My enquiry was sorted to my complete satisfaction and I feel she should receive commendation for her excellent service.’

Viewer, Meridian



‘I followed your advice and called back the engineer who had fitted the new aerial. The problem was with the booster for the upstairs TV – all sorted now! Thanks again – you are doing a great job!’

Viewer, London



‘As the trade body representing the TV reception and distribution industry, the Confederation of Aerial Industries Ltd (CAI) has been extremely pleased with the support it has received from Digital UK throughout the whole of the switchover programme.’

Tim Jenks Senior Executive, CAI Ltd



‘Many thanks for a great service....I was sceptical but this has been a fine example of positive, timely, efficient customer service.’

Viewer, Yorkshire

‘Just had excellent service from your call centre by a young lady manning the phones. She helped me to get my 82-year old Mum’s TV up and running, which was proving difficult for me to work out. She was patient, had a great telephone manner and could not have been more helpful and polite. Thank you for making an elderly lady very happy.’

Viewer, London

‘I am very grateful to Digital UK for their help and support during the DSO period – the sound advice, timely support and early communication of identified potential issues were extremely useful in the training and preparation for SEUK call centre staff...’

Hugh Lobo, Customer Support, SAMSUNG

Switchover timetable

TV region	Transmitter group	Area served	Homes (000s)	Stage one	Stage two
Border	Selkirk	Scottish Borders	52	6 Nov 08	20 Nov 08
	Douglas	the Isle of Man	38	18 Jun 09	16 Jul 09
	Caldbeck	Cumbria, south west Scotland and the south Lakes	308	24 Jun 09	22 Jul 09
West Country	Beacon Hill	Torbay and south Devon	132	8 Apr 09	22 Apr 09
	Stockland Hill	Exeter, parts of Devon, Somerset and Dorset	206	6 May 09	20 May 09
	Huntshaw Cross	north Devon	66	1 Jul 09	29 Jul 09
	Redruth	west Cornwall and the Isles of Scilly	122	8 Jul 09	5 Aug 09
	Caradon Hill	Plymouth, parts of Devon and east Cornwall	255	12 Aug 09	9 Sep 09
Wales	Kilvey Hill	the Swansea area	132	12 Aug 09	9 Sep 09
	Preseli	much of south west Wales	83	19 Aug 09	16 Sep 09
	Carmel	parts of south and central Wales	110	26 Aug 09	23 Sep 09
	Llanddona	north west Wales	95	21 Oct 09	18 Nov 09
	Moel y Parc	north east Wales	179	28 Oct 09	25 Nov 09
	Long Mountain	parts of east and central Wales	24	4 Nov 09	3 Dec 09
	Blaenplwyf	parts of west and central Wales	26	10 Feb 10	10 Mar 10
	Wenvoe	Cardiff, Newport and south east Wales	649	3 Mar 10	31 Mar 10
Granada	Winter Hill	Liverpool, Manchester, Lancashire, Cheshire and north Staffordshire	3,041	4 Nov 09	2 Dec 09
West	Mendip	Bristol, parts of Somerset, Dorset, Wiltshire and Gloucestershire	913	24 Mar 10	7 Apr 10
STV North	Bressay	the Shetland Islands	9	5 May 10	19 May 10
	Keelylang Hill	the Orkney Islands	10	12 May 10	26 May 10
	Rumster Forest	Caithness and North Sutherland	23	2 Jun 10	16 Jun 10
	Eitshal	Lewis, Wester Ross, north west Sutherland and parts of Harris and Skye	12	7 Jul 10	21 Jul 10
	Skriaig	Skye, Harris, North Uist, Benbecula, South Uist and parts of Barra	8	14 Jul 10	28 Jul 10
	Angus	Angus, Dundee, Perth and parts of Fife	210	4 Aug 10	18 Aug 10
	Durris	Aberdeen and Aberdeenshire	221	1 Sep 10	15 Sep 10
	Knockmore	Morayshire, Strathspey and parts of Easter Ross	39	8 Sep 10	22 Sep 10
	Rosemarkie	Inverness and the Great Glen	70	6 Oct 10	20 Oct 10
Channel	Fremont Point	the Channel Islands	50	17 Nov 10	N/A
STV Central	Torosay	south west Highlands and Islands	17	13 Oct 10	27 Oct 10
	Darvel	parts of central Scotland, Argyll and Bute	197	11 May 11	25 May 11
	Rosneath	Rosneath	44	11 May 11	25 May 11
	Craigkelly	Lothian, parts of Edinburgh and parts of Fife	455	1 Jun 11	15 Jun 11
	Black Hill	Glasgow, central Scotland and parts of Edinburgh	1,020	8 Jun 11	22 Jun 11

TV region	Transmitter group	Area served	Homes (000s)	Stage one	Stage two
Central	Nottingham	the Nottingham area	74	30 Mar 11	13 Apr 11
	Lark Stoke	the Stratford-upon-Avon area	38	6 Apr 11	20 Apr 11
	Bromsgrove	the Bromsgrove area	30	6 Apr 11	20 Apr 11
	Ridge Hill	Herefordshire, south Shropshire and parts of Gloucestershire	286	6 Apr 11	20 Apr 11
	The Wrekin	north Shropshire and south Cheshire	280	6 Apr 11	20 Apr 11
	Waltham	much of the East Midlands	815	17 Aug 11	31 Aug 11
	Sutton Coldfield	much of the West Midlands	2,123	7 Sep 11	21 Sep 11
	Fenton	Stoke-on-Trent and Newcastle-under-Lyme	128	7 Sep 11	21 Sep 11
	Oxford	Oxfordshire, parts of Berkshire and Buckinghamshire	415	14 Sep 11	28 Sep 11
	Oliver's Mount	the Scarborough area	31	3 Aug 11	17 Aug 11
Yorkshire	Belmont	Lincolnshire and East Yorkshire	712	3 Aug 11	17 Aug 11
	Sheffield	the Sheffield area	119	10 Aug 11	24 Aug 11
	Chesterfield	the Chesterfield area	34	10 Aug 11	24 Aug 11
	Emley Moor	most of Yorkshire	1,756	7 Sep 11	21 Sep 11
Anglia	Sandy Heath	Cambridgeshire, Northamptonshire and Bedfordshire	966	30 Mar 11	13 Apr 11
	Sudbury	parts of Suffolk and Essex	523	6 Jul 11	20 Jul 11
	Tacolneston	Norfolk and north Suffolk	408	9 Nov 11	23 Nov 11
Meridian	Hannington	parts of Hampshire, Berkshire and Surrey	481	8 Feb 12	22 Feb 12
	Midhurst	much of West Sussex	99	29 Feb 12	14 Mar 12
	Whitehawk Hill	the Brighton area	119	7 Mar 12	21 Mar 12
	Rowridge	Hampshire, the Isle of Wight, parts of Dorset, Wiltshire and West Sussex	728	7 Mar 12	21 Mar 12
	Tunbridge Wells	the Tunbridge Wells area	54	30 May 12	13 Jun 12
	Heathfield	East Sussex and south west Kent	214	30 May 12	13 Jun 12
	Hastings	the Hastings area	20	30 May 12	13 Jun 12
	Bluebell Hill	north and mid Kent	217	13 Jun 12	27 Jun 12
	Dover	south and east Kent, and parts of East Sussex	238	13 Jun 12	27 Jun 12
London	Crystal Palace	Greater London and parts of the Home Counties	4,858	4 April 12	18 April 12
Tyne Tees	Bilsdale	Teesside and much of North Yorkshire	595	12 Sep 12	26 Sep 12
	Chatton	north Northumberland	33	12 Sep 12	26 Sep 12
	Pontop Pike	Tyne and Wear and County Durham	790	12 Sep 12	26 Sep 12
Northern Ireland	Limavady	north west Northern Ireland	104	10 Oct 12	24 Oct 12
	Brougher Mountain	south west Northern Ireland	37	10 Oct 12	24 Oct 12
	Divis	Belfast and the surrounding area	508	10 Oct 12	24 Oct 12

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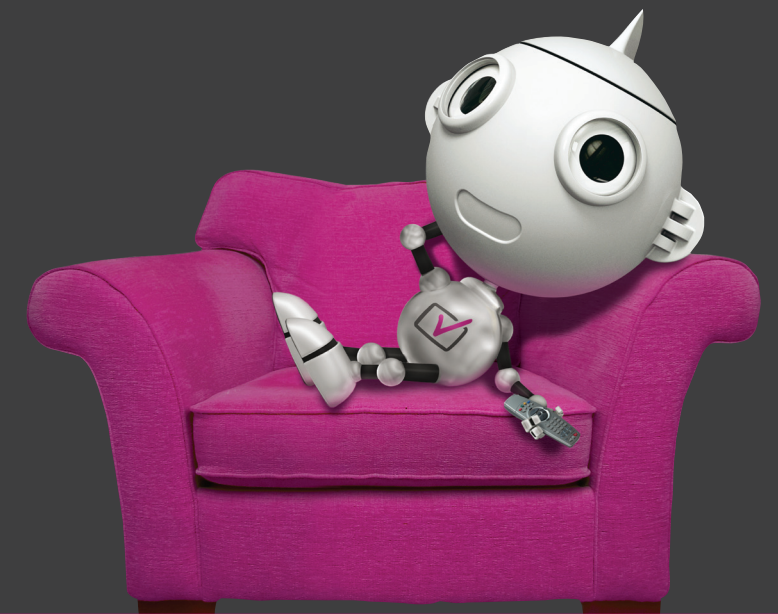
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